

AMENDMENT TO THE CLAIMS

Please cancel claims 1 and add new claims 23-44 as follows:

Claims 1 (cancelled)

Claims 2-22 (cancelled with the Preliminary Amendment filed March 25, 2005).

23. (New) A bacterial culture of *M. elsdenii* having substantially the same 16S ribosomal RNA sequence as that of the *M. elsdenii* strain deposited at NCIMB, Aberdeen, Scotland, UK under number NCIMB 41125.

24. (New) The bacterial culture of claim 23 that is the *M. elsdenii* strain deposited at NCIMB, Aberdeen, Scotland, UK under number NCIMB 41125.

25. (New) The bacterial culture of claim 23 wherein the 16S ribosomal RNA sequence is at least 97% homologous to the 16S ribosomal RNA sequence of the *M. elsdenii* strain deposited at NCIMB, Aberdeen, Scotland, UK under number NCIMB 41125.

26. (New) The bacterial culture of claim 23 which is further characterized by its ability to utilize lactate efficiently in the presence of sugars; its resistance to ionophores; its relatively high growth rate; its capability to produce predominantly acetate; and its capability to proliferate at pH values as low as 4.5.

27. (New) A composition for facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the composition comprising the bacterial culture of claim according to claim 25.

28. (New) A method for facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the method comprising administering to the rumen of said ruminants an effective amount of the composition of claim 27.
29. (New) A feed-additive for ruminants comprising a carrier and an effective amount of the bacterial culture of claim 25.
30. (New) A feed-additive according to claim 29 wherein the culture is disposed in an anaerobic container.
31. (New) A method for the treatment of ruminal lactic acidosis comprising anaerobically administering to the rumen of a ruminant an effective amount of a bacterial culture according to claim 25.
32. (New) The method of claim 31 wherein the treatment prevents at least one ruminal lactic acidosis, rumenitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses.
33. (New) A composition for the treatment of ruminal lactic acidosis comprising an effective amount of a bacterial culture according to claim 25.
34. (New) The composition of claim 33 wherein the treatment prevents at least one of ruminal lactic acidosis, rumenitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses in ruminants.
35. (New) A preparation for the treatment of ruminal lactic acidosis comprising an inoculum of a bacterial culture according to claim 25 and a sterile anaerobic growth medium.

36. (New) The preparation of claim 35 wherein the culture and the medium are disposed in separate chambers of an anaerobic container, wherein the chambers are anaerobically connectable to each other.

37. (New) The preparation of claim 36 wherein the preparation prevents at least one of ruminal lactic acidosis, rumenitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses in ruminants.

38. (New) A method of achieving in ruminant at least one of increased milk production; improved feedlot performance; improved growth rate; decreased finishing time; lower digestive morbidity and mortality; lower incidence of lactic acidosis and related diseases; improved feed conversion efficiency; decrease in roughage content in feeds; and the capability to feed on relatively higher concentrate diets, the method comprising administering to the rumen of a ruminant an effective amount of the bacterial culture of claim 25.

39. (New) The method according to claim 38 wherein the culture is administered anaerobically.

40. (New) A method of isolating a culture of a ruminal microorganism, the method comprising obtaining a sample of ruminal fluids and cultivating the sample on a growth medium, the method being characterized in that a plurality of parameters selected from the group comprising growth medium constituents, dilution rate, pH, temperature, anti-microbial agents, gaseous environment, redox potential, lack of nutrients and challenging organisms are pre-selected to favor of a superior rumen microorganism to the detriment of inferior rumen microorganisms.

41. (New) A bacterial culture of *M. elsdenii* produced according to the method of claim 40.
42. (New) A composition for facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the composition comprising the bacterial culture of claim 41.
43. (New) A method of facilitating the adaptation of ruminants from a roughage-based diet to a high-energy concentrate-based diet, the method comprising administering to the ruminant an effective amount of the composition of claim 42.
44. (New) A feed-additive for ruminants comprising the culture of claim 41.
45. (New) A method for the treatment of ruminal lactic acidosis comprising administering to the ruminant an effective amount of the composition of claim 42.
46. (New) The method of claim 45 wherein the treatment prevents at least one of ruminal lactic acidosis, rumenitis, ruminal lactic acidosis induced laminitis, ruminal lactic acidosis induced bloat and liver abscesses.
47. (New) A composition for the treatment of ruminal lactic acidosis comprising the culture of claim 41.